

NEW MOSSES OF NORTH AMERICA. VI.

F. RENAULD AND J. CARDOT.

(WITH PLATES III-V)

GYMNOSTOMUM CALCAREUM N. et H. var. **Winonense** Holzinger in litt.—Differs from the var. *tenellum* Sch. by the leaves acute and the capsule not constricted at the mouth. Very small and loosely cespitose or gregarious.

Minnesota: Winona, amongst the stems of *Myurella Careyana* (J. M. Holzinger, 1893).

Dicranum Demetrii.—In very compact, yellowish-green tufts, brownish and a little tomentose below. Stems erect, simple or sparingly branching, three to four inches long. Leaves crowded, erecto-patent when moist, crispate when dry, from an oblong-obovate base rather suddenly constricted and linear-subulate, canaliculate, smooth, quite entire or subsinuate at apex, 3–6^{mm} long, 0.30–0.60^{mm} broad at base; costa narrow, percurrent or subexcurrent; cells smooth, small, quadrate or short rectangular and incrassate in the upper part, becoming narrowly linear and slightly porose toward the base near the costa, the alar looser, subrectangular. Perichæcial leaves from an oblong sheathing base suddenly long cuspidate. Fruit unknown. Seems diœcious.

Labrador: Rattler's Bight (Rev. A. C. Waghorne, 1892; comm. Rev. C. H. Demetrio). Specimens bearing young fructifications and remains of old pedicels.

Seems to have some affinities with *D. elongatum* Schw., but is readily distinguished at first sight from this species by its leaves crisped in dry state, which gives it rather the appearance of *D. montanum* Hedw., and also by the very different areolation of the leaves.

Dicranum trachyphyllum.—Diœcious. Cespitose, green or olivaceous. Stems erect; 2–6^{cm} long, simple or branching,

sparingly tomentose in the lower part. Leaves falcate or flexuous-patent when moist, flexuous-crisped when dry, often tufted, linear-lanceolate, canaliculate above and rather thickly subulate, strongly serrate on the margins, spinulose-dentate at apex; costa stout, about one-fourth the width of leaf-base, generally very rough at back, percurrent or short-excurrent into a spinulose-dentate point; cells of the upper part quadrate or subrotundate, mostly papillose on the back, oblong or linear and smooth toward the base, the alar lax, inflated, brownish or hyaline. Perichæcial leaves from an oblong sheathing base constricted into a long rough subula; costa narrower. Pedicel pale, at last twisted to the left above when dry. Capsule and peristome as in *D. fuscescens*.

Newfoundland: Leading Pickles and Hermitage Bay (*Rev. A. C. Waghorne*, 1893 and 1895).

Closely allied to *D. fuscescens* Turn., to which it might be subordinated as a subspecies, but nevertheless easily distinguished by the leaves more strongly serrate, very rough on the back, less narrowly subulate and the nerve thicker and broader.

DICRANUM FUSCESCENS Turn. var. *EATONI* Ren. et Card. in *Bull. de l'herb. Boissier* 4:15. (*Musci Am. Sept. Exsicc.* no. 206).—A striking form, approaching var. *flexicaule* BS., but forming dense deep tufts; stems erect, not flexuose, reaching 20^{cm} high; leaves shorter; lower cells less elongated and with thinner walls.

New Hampshire: Mt. Washington (*D. C. Eaton*, 1894). Sterile specimens only.

We received this very interesting variety from the lamented D. C. Eaton some weeks before his death.

Dicranum subfulvum.—Loosely cespitose, dark green, filled with earth below. Stems erect, 1–2^{cm} high, simple or sparingly branched, little radiculose. Leaves erecto-patent, flexuous, crisped when dry, narrowly lanceolate, acuminate-subulate, subula canaliculate, subentire or minutely denticulate at apex; costa strong, very broad, about half width of leaf base, smooth or nearly so at back; cells very small, opaque, quadrate, scarcely papillose, somewhat larger and quadrate or short-rectangular

below, all very chlorophyllose, the alar lax, enlarged, quadrate or subhexagonal, pellucid, yellowish, brownish or subhyaline. Flowers and fruit unknown.

Distinguishable from *D. fulvum* Hook. by the stems not flexuose, the leaves not tufted, nearly entire, the costa broader, smooth or only very slightly papillose on the back and the supra-alar cells chlorophyllose, scarcely distinct from the others.

FISSIDENS DECIPIENS DeNot. var. **Winonensis**.—Differs from the type by its smaller size, the smaller and narrower leaves with the pellucid border most often indistinct and the less opaque areolation.

Minnesota: Winona (*J. M. Holzinger, Mosses of Minnesota*, no. 6).

Trichostomum indigenus.—Very small, gregarious, dirty green; stems scarcely 1–2^{mm} high. Leaves patent, subcirrate when dry, 1.25–1.75^{mm} long, oblong-lingulate, obtuse, apiculate or subacute, margins revolute below, plane above, very minutely crenulate by the projection of the papillæ; costa stout, percurrent or vanishing just below the apex; cells minute, rotundate or subquadrate, densely papillose, becoming gradually larger, oblong, rectangular, pellucid and smooth toward the base. Perichæcial leaves from an oblong and loosely reticulate base, linear-lingulate, obtuse or mucronate. Pedicel thin, reddish, paler above, 4–6^{mm} long, slightly twisted to the left under the capsule when dry. Capsule small, erect, oblong-cylindrical, chestnut-colored, about 1^{mm} long. Lid unknown. Annulus simple, teeth of the peristome purple, slightly twisting, on a narrow basilar membrane, segments filiform, minutely granulose, marked with a longitudinal line, articulate, slightly nodose and partly connected in the lower part. Probably dioecious (male flowers unseen).

Newfoundland (*Rev. A. C. Waghorne*, 1895).

Resembling the smallest forms of *Barbula unguiculata* Hedw. by the shape and the areolation of the leaves, but well distinct by the peristome much shorter and less twisted, the teeth describing scarcely half a spiral turn.

ULOTA CRISPULA Brid. var. **dolosa**.—Distinct from the genuine form by the dark green tint, the leaves less crispate and generally broader and the areolation less incrassate, the lower cells looser, shorter, hyaline or greenish, not yellow.

District of Columbia: Tenallytown, mixed with *Orthotrichum Ohioense* and *O. Braunii* (J. M. Holzinger, 1892).

This variety differs considerably from the type by its much looser basilar areolation, and would be easily taken for a well distinct species; but we have specimens, gathered at Atco, New Jersey, by Mr. H. A. Green, which are intermediate between this variety and the typical form.

AMBLYODON DEALBATUS Pal. Beauv. var. **AMERICANUS** Ren. et Card. in *Bull. de l'herb. Boissier* 4: 13. (*Musci Am. Sept. Exsicc.* no. 180).—Differs from the European type by the segments of the endostome more subulate, nodulose and strongly granulose, and by the leaves more distinctly serrate above.

Minnesota: Osceola, St. Croix river (J. M. Holzinger, 1890).

PHILONOTIS VENELLA C. Muell. var. **Coloradensis**.—Areolation more chlorophyllose; marginal cells narrower, teeth of the leaves more patulous. Sterile.—Perhaps a small, depauperate form of *Ph. Muehlenbergii* Brid.?

Colorado: Springdale, Boulder co. (Marie Holzinger, 1892; comm. J. M. Holzinger).

ANOMOBRYUM FILIFORME Husn. var. **Americanum**.—Differs from the var. *concinatum* (*Bryum concinatum* Spr.) by the more slender and shorter stems, the smaller leaves and the shorter cells. Costa percurrent or vanishing just below the point. Sterile.

Wisconsin: Trempealeau Mt. (J. M. Holzinger, 1893).

With Rev. Boulay, we consider *Anomobryum filiforme* (Dicks.) Husn., *A. juliforme* Solms, *A. sericeum* De Lacroix and *A. concinatum* (Spr.) Husn. as belonging to the same specific type, which is widely distributed under numerous local or regional forms, throughout Europe, Africa, North, Central, and South America.

HYPNUM CHRYSOPHYLLUM Brid. var. BREVIFOLIUM Ren. et Card. in *Bull. de l'herb. Boissier* 4:19 (*Musci Am. Sept. Exsicc.* no. 248). —Leaves shorter and areolation somewhat looser than in the typical form.

District of Columbia: Rock creek (*J. M. Holzinger*, 1891). Sterile specimens.

Hypnum implexum.—Tufts depressed, light green. Stems intricate, pinnately ramulose, branchlets hooked, fastigate above. Leaves falcate-secund, from a broadly ovate-deltoid base rather suddenly constricted into a narrow subulate acumen, plane on the margins, quite entire or subdenticulate at the base of the acumen; costa double, short; cells narrowly linear, those of the angles few but distinct, small, quadrate, greenish or pellucid. Flowers and fruit unknown.

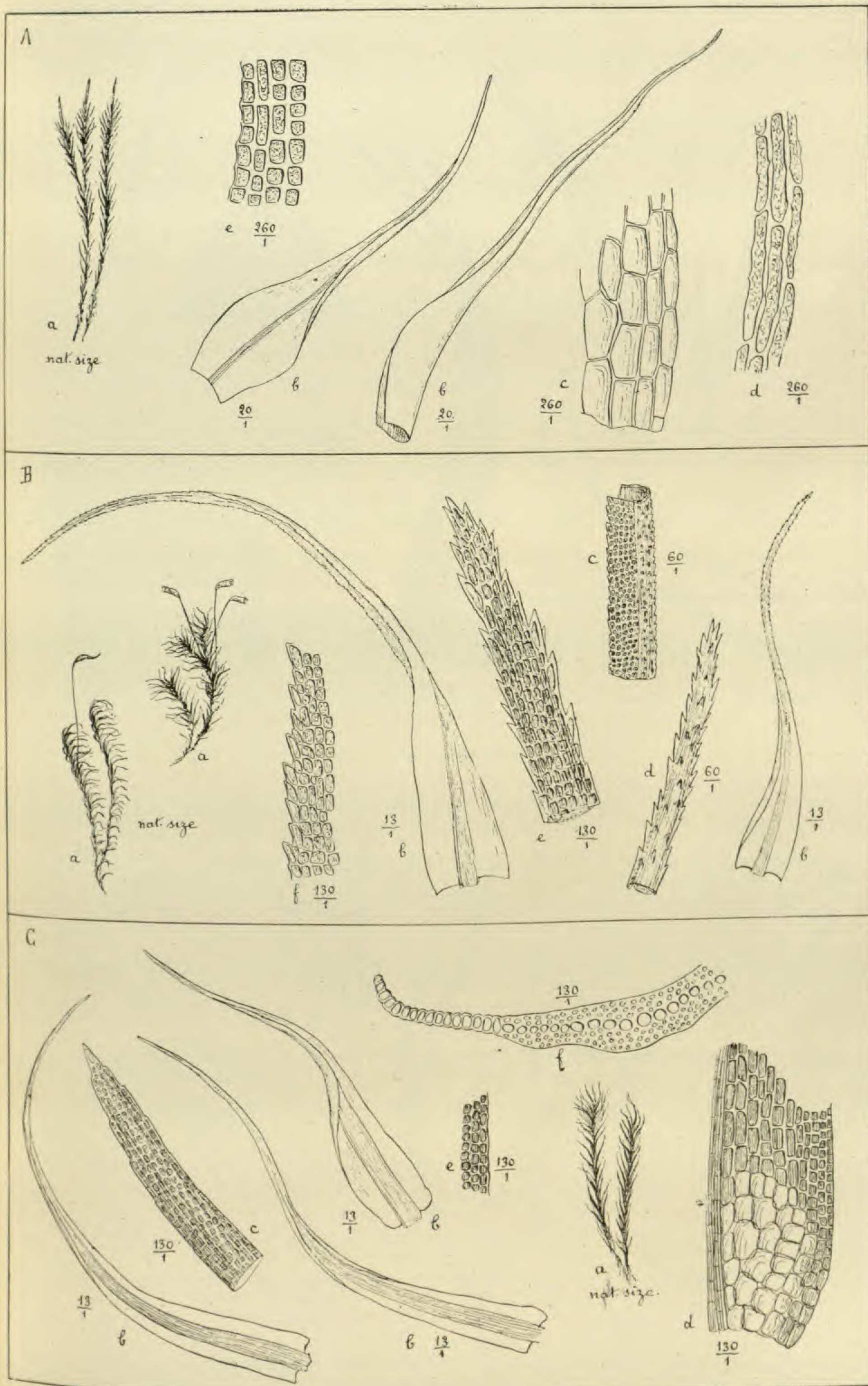
Labrador: Seal Island (*Rev. Arthur C. Waghorne*, 1893).

Allied to *H. hamulosum* Sch., but more robust, and distinct by the light green tint; the leaves broader at base and more suddenly constricted into a subulate acumen, and the alar cells more numerous and more conspicuous. Much resembling the small green form of *H. cupressiforme* L., but in this the leaves are narrower and the alar cells still much more numerous and conspicuous.

Hypnum subeugyrium.—Monœcious, resembling *H. eugyrium* Sch. var. *Mackayi* Sch., from which it differs by the alar cells of the leaves small, quadrate, not forming excavate auricles and the capsule exannulate. From the forms of *H. palustre* L. having the leaves subimbricate, it is distinguishable by the minutely denticulate apex of the leaves and by the costa always double and shorter.

Newfoundland: Exploits (*Rev. A. C. Waghorne*, 1893).

HYPNUM ORBICULARICORDATUM Ren. et Card. in *Bull. de l'herb. Boissier* 4:19 (*Musci Am. Sept. Exsicc.* no. 249). Tufts very soft, pale lurid-green above, decolored whitish-yellow and brownish-variegated below. Stems slender, erect, 4–9^{cm} high, simple or sparingly branching, not radiculose, cuspidate at apex. Leaves soft, erecto-patent or very loosely imbricate, subundu-



RENAULD and CARDOT on NEW MOSSES.